Navy Sea Trial Event / Fleet Experimentation Activity Summary

Joint Innovation and Experimentation Conference
9-12 Jan 07

Context: Navy CD&E Responsibilities and Focus

- *Fleet represented in JCD&E Enterprise by NWDC*
  - *Acting on behalf of U.S. Fleet Forces Command (USFFC), JFCOM Naval Component*
  - *Primary Fleet "customers" are Sea Trial Operational Agents (OAs)*
    - *Second Fleet – Sea Strike, Sea Base*
    - *Third Fleet – Sea Shield*
    - *Network Warfare Command - FORCEnet*
- *Per USFFC direction,*
  - *Sea Trial / NWDC remain focused on near-term Fleet CONOPs development*
  - *OPNAV staff is Navy entry point for far-term concepts*
- *Majority of Navy CD&E is developed / archived at the Secret level*
  - *Navy portal is http://www.nwdc.navy.smil.mil/STIMS*

Fleet CONOPS Development with Potential Joint Interest

Fleet CONOPS Name	Fleet CONOPS Owner	Status
Maritime Headquarters w/ Maritime Operation Center	Second Fleet	Continued development of final draft. Major fleet interest item
Fleet Information Operations	NETWARCOM	Approved by USFFC
Maritime Civil Affairs	Naval Expeditionary Combat Cmd	Final draft in route to USFFC for approval
Maritime Domain Awareness	NETWARCOM	MOC-focused draft being replaced by broader CONOPs. Initial draft in work.
Computer Network Defense	NETWARCOM	Initial draft in work
Joint High Speed Vessel (JHSV)	Second Fleet	Final Draft comment resolution in work
Seabasing	Second Fleet	Initial draft comment resolution in work
Bandwidth Management for Aggregated Operations	NETWARCOM	Table of contents development in work
Maritime Ballistic Missile Defense (Rev A)	Third Fleet	Third Fleet developing proposed revision to approved CONOPs

Note – with the exception of Naval Expeditionary Combat Command, CONOPS owners shown are the Sea Trial Operational Agents.

Completed Fleet CONOPS with Potential Joint Interest

- *Global ASW*
- *GWOT Defensive (Maritime HLD)*
- *GWOT Offensive*
- *Riverine Group*
- *Maritime Ballistic Missile Defense*

Note – completed Fleet CONOPS are posted on the Sea Trial Information Management System

http://www.nwdc.navy.smil.mil/STIMS

Recently Completed Navy Experimentation Efforts

Medical Stabilization System LOE (29-30 Aug 06)

Event / Activity Description

Purpose was to examine the ability of a high speed vessel to function as a modality of maritime enroute care capability (ERCC) when augmented by commercial off the shelf patient stabilization technology. PHMSS technology was compared to non-stabilized SR901RT multi-purpose utility platform aboard SEA FIGHTER.

Key Objectives / Warfighter Challenges

- Explore use of COTS stabilization technology aboard high speed vessels. Specifically, evaluate PHMSS ability to:
  - Provide stable platform on smaller vessel when maneuvering at various speeds and in varying sea states
  - Reduce or eliminate vibration
  - Positively impact provider's ability to perform life-saving medical procedures.

Participants:

Key Findings:

- *PHMSS positively reviewed by medical provider participants. Comments were generally favorable regardless of ship's speed and vibration.*
- *PHMSS facilitated ability to conduct CPR by eliminating the need to compensate for ship's motion*
- *PHMSS aided ability to perform IV insertions and intubations.*
- *Recommendations:*
  - *Continued testing in sea states > 3*
  - *Test advanced stability platform that is larger, adjustable, and more securely attached to provider's platform*
  - *Conduct testing on ability to perform more complex procedures using surgical simulations*
  - *Test PHMSS on other platforms (LCAC, small boats, road transportation, etc)*
  - *Test alternate designs such as floor-mounted modular medical units.*
- *Quick Look message - COMNAVWARDEVCOM 231835Z Oct 06.*

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Trident Warrior 06 (16-26 June 06)

NETWARCOM's primary FORCEnet Sea Trial event intended to provide speed-to-capability - defined as a rapid fielding of improved command and control warfighting capability to the fleet, with full supportability and maintainability

Event / Activity Description

Advanced Warfighting Experiment focused on development of FORCEnet (C2) capabilities. Theme of TW06 was to examine MDA Efforts in GWOT Context. An additional goal was to develop TTP for new FORCEnet capabilities to optimize execution of naval operations. TW06 was conducted in SOCAL and WESTPAC.

Participants:

NETWARCOM (lead), SPAWAR, AUSCANNZUKUS MNTG (coalition lead), USS BONHOMME RICHARD, USS RUSHMORE, USS DENVER, USS PINCKNEY, USS LINCOLN, USS MOBILE BAY, USS CHAFEE, USS O'KANE, USS CHEYENNE, USS KEY WEST, SEA FIGHTER, HMCS VANCOUVER, HMCS ALGONQUIN, HMCS REGINA, HMAS MANOORA, HMAS STUART, HMS DARING, Stiletto, C3F HQ, COMPACFLT, China Lake, CTF 12, JSIC Suffolk, Makaha Ridge, PRNOC, NUWC Newport, PAX River, Suitland MD, TSC K-Bay

Key Objectives / Warfighter Challenges

- **Human Systems Integration / KM**
- **Cross Domain Solutions / Coalition**
- **Sea Warrior (e-learning at sea / reachback)**
- **Integrated Automated Identification System (AIS)**
- **USW Decision Support System (USW DSS)**
- **Maritime Targeting (UAV and Naval Fire Control System enhancements)**
- **MDA C2 / COP**
- **SATCOM Management and Wireless Network Systems**
- **IO Staff Collaboration**

Key Findings:

- ***Unmanned Aerial System: significantly enhanced warfighter capability***
- ***Cross domain tools significantly enhanced warfighter capabilities in Defense Support for Civil Authorities mission. Need to improve and train to policy/processes for unclassified information sharing***
- ***Chat Translation Tool provided significantly enhanced capability. Acquisition and training on this tool is recommended.***
- ***Web-based tools for UNCLASS data integration between fed / state / local agencies showed great promise.***
- ***In e-learning, pre-staged information content reduced outbound bandwidth usage considerably.***
- ***Operational Readiness Test System Tech Assist Remote Support (ORTSTARS) for maintenance distance support worked well and is recommended for broader range of combat systems.***
- ***Integration of Automated Information System (AIS) into GCCS-M 4.x recommended for continued development***
- ***Beyond LOS machine-machine (M2M) connectivity for naval fires worked exceptionally well. Recommend incorporating M2M procedures into doctrine and training***
- ***Laser comms provided high quality comms between tactical units in inclement weather at over 9 miles. Recommend accelerated development.***

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12 FORCEnet Focus Areas 40+ Technologies / TTP's 100+ Objectives

Primary

Navy Sea Trial Planned Events and Activities

Trident Warrior 07

Event / Activity Description

Advanced Warfighting Experiment focused on development of FORCEnet (C2) capabilities. Theme of TW07 will be maritime security through Maritime Domain Awareness (MDA) built and shared with coalition, interagency and non-governmental organizations. TW07 supports the OPNAV 100 day plan and Program Review 09 analytic summary.

Participants:

NETWARCOM (lead), C2F, SPAWAR, ONI, NCIS, NORTHCOM, AUSCANNZUKUS MNTG (coalition lead), CCSG – 10, CNAL, CNSL, CVW – 3, CDS – 26, USS HARRY S TRUMAN, USS HUE CITY, USS CARNEY, USS WINSTON S CHURCHILL, USS JAMES E WILLIAMS, USS OSCAR AUSTIN, Stiletto, HMCS CHARLOTTETOWN, HMS OCEAN, HMAS PERTH, HMAS ARUNA, HMNZS TE MANA, NCTAMSLANT – Norfolk, UARNOC – Norfolk, D29 (C2F) – Norfolk, ONI – Suitland, NCIS – Norfolk, NSWC – Dahlgren, U.S. NORTHCOM - Colorado Springs, FIST – Suitland, CEC Test Site - Dam Neck

Key Objectives / Warfighter Challenges

- Determine the requisite amount, composition, and disposition of data correlation / fusion needed for Global Maritime Operations Centers (MOC) supporting Maritime Domain Awareness.
- Develop practical methods to improve interoperability between U.S. Navy and potential coalition partner Navies supporting the Global Maritime Partnership strategy.
- Identify funding, personnel, organization and processes for identification, migration and reduction of legacy networks while supporting Sea Warrior capability to the fleet.
- Improve Network capabilities, security, reliability and efficiency and mitigation opportunities (alternate comm paths / CONOPs) available to combat loss / degradation.
- Improve platform tactical communication networks (radios, data links and computer networks) performance, security and interoperability.
- Assess impact of SOA on warfighting effectiveness and provide recommended C2 investments based on analysis
- Recommend technologies for rapid capability development.

Events / Milestones

- CDC: 28 Feb – 1 March 06
- IPC: 15 – 17 Aug 06 (Norfolk)
- Objective Dev WS: 25 – 29 Sep 06 (Norfolk)
- Objective Dev WS: 2 – 6 Oct 06 (San Diego)
- MHQ MOC Wargame: 23-26 Oct 06
- MPC: 14 – 16 Nov 06 (Norfolk)
- Risk Reduction LOE: 4 – 15 Dec 06 (SSC San Diego Lab)
- **Cognitive Risk Reduction LOE: 17-18 Jan 07 (Norfolk)**
- **FPC: 6 – 8 Feb 07 (Norfolk)**
- **Execution: 20 – 30 Mar 07 (Vacapes)**
- **Final Report: 1 Aug 07**
- **Military Utility Assessment: Sep 07**

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12 FORCEnet Focus Areas 70+ Technologies / TTP's 150+ Objectives

Primary

Trident Warrior 08

Event / Activity Description

Advanced Warfighting Experiment focused on development of FORCEnet (C2) capabilities. Theme of TW08 will take place in the context of Maritime Security and HS/HD. The overarching theme will be MDA with specific interest in Coalition Collaboration and MHQ w/ MOC issues. Desire multiple MHQ MOCs (possibly CPF, C3F, C7F and Coalition) to explore operational to tactical level command, Reachback -- Operational / tactical seams, Global MDA and Distributed Operations.

Participants:

NETWARCOM (lead). CPF, C3F, AUSCANNZUKUS MNTG (coalition lead). TW08 will again align with RIMPAC 08 assets focusing on pre-RIMPAC transits (both west (C3F assets) and east (C7F assets)).

Focus Areas

- Networks
- C2
- Coalition
- Cross Domain Solutions / Multi-level security
- ISR
- FIRES
- Information Operations
- Knowledge & Information Management
- Sea Warrior / Distant Support
- MHQ w/ MOC

Events / Milestones

- CDC: 8 Nov 06 (San Diego)
- Technology Selection: May 07
- IPC: Sep 07 (San Diego)
- MPC: Jan 08 (San Diego)
- Risk Reduction LOE: TBD
- Cognitive Risk Reduction LOE: TBD
- FPC: Apr 08 (San Diego)
- Execution: Jun 08 (SOCAL and WESTPAC)
- Final Report: Aug 08
- Military Utility Assessment: Sep 08

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NWDC POC Information

	NAME	Organization	Phone	Email	Subject Area	Comment
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Near term	CDR Joe Pearl	NWDC JCD&E Deputy Director & NWDC LNO to J9	757-203-3092, DSN 668	Joseph.pearl@je.jfcom.mil	LNO government lead	J9 Suffolk
Near term / Far term	Steve Rowe Elliott Fellman Mike Lucarelli Arch Taylor Ted Hill	NWDC LNO staff	757-203-3091/3984 DSN 668	Steve.rowe@je.jfcom.mil; Elliott.fellman@je.jfcom.mil; Michael.lucarelli@je.jfcom.mil; Arch.taylor@je.jfcom.mil; Theodore.hill@je.jfcom.mil	JCD&E Process Sea Basing FORCENet Sea Shield (HLS/HLD) Sea Strike	J9 Suffolk
Far term	CDR Mark Muzii	OPNAV N81	703-614-0127	Mark.muzii@navy.mil	Urban Operational POC	Washington, DC
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Questions